

ABSTRACT

The present invention relates to a discharge lamp lighting apparatus in which overshoot occurring when the polarity of AC rectangular wave voltage / current is inverted is suppressed. An inverter converts DC power supplied by a converter to AC rectangular wave power and outputs the AC rectangular wave power. A power calculation unit generates a power detection signal based upon a voltage detection signal and a current detection signal detected on the output side of the converter. A control target value setting unit outputs an output power command value to be used to control the DC power so as to achieve a target value. A correction signal generation unit outputs a correction signal to be used to correct the output power command value in conformance to the power detection signal in synchronization with a polarity inversion of the AC rectangular wave power. A converter control signal generation unit outputs a signal corresponding to the error of the power detection signal relative to the output power command value. A pulse width control unit implements pulse width control on the converter based upon the signal provided by the converter control signal generation unit.